

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Chung-Kai CHOW et al.
Appl. No. : 09/153,864
Filed : 9/16/1998
Title : POWER ON RESET TECHNIQUES FOR AN INTEGRATED
CIRCUIT CHIP

Grp/A.U. : 2816
Examiner : Jeffery S. Zweizig

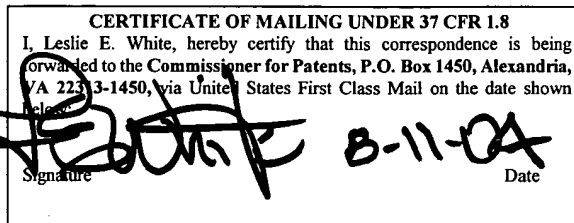
Docket No. : 0885-CS

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Commissioner for Patents
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Dear Sir:

SUBMISSION OF FORMAL DRAWINGS

Sir:

Enclosed please find thirty-five (35) sheets of formal drawings for review by the Patent and Trademark Office. These drawings are being submitted concurrently with the above-referenced Petition to Revive, Issue Fee transmittal and fee payment.

No extra fees are believed to be due by the filing of this submission; however, if any fees are due by the filing of the enclosed documents, including any fees incurred by an extension of term, please consider this paragraph such a Request for term, and charge any fees associated with the Request or any other fees incurred by the filing of this document to Cirrus Logic Deposit Account No. 03-2028/0885-CS.

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(512) 851-4465

Date: August 11, 2004

Respectfully submitted,

By: MLZ

Steven Lin
Reg. No.: 35,250
Customer No. 20284

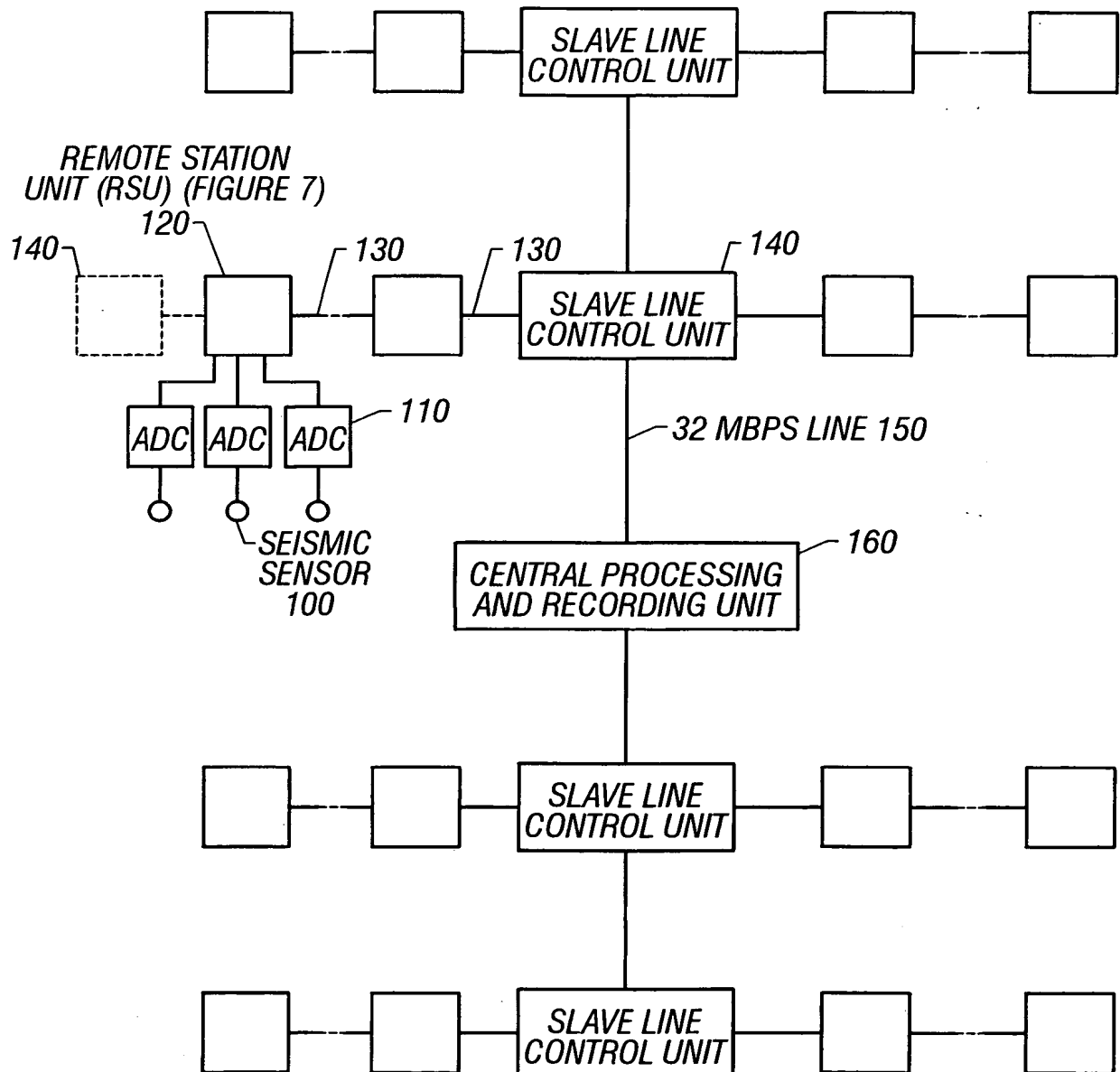


FIG. 1

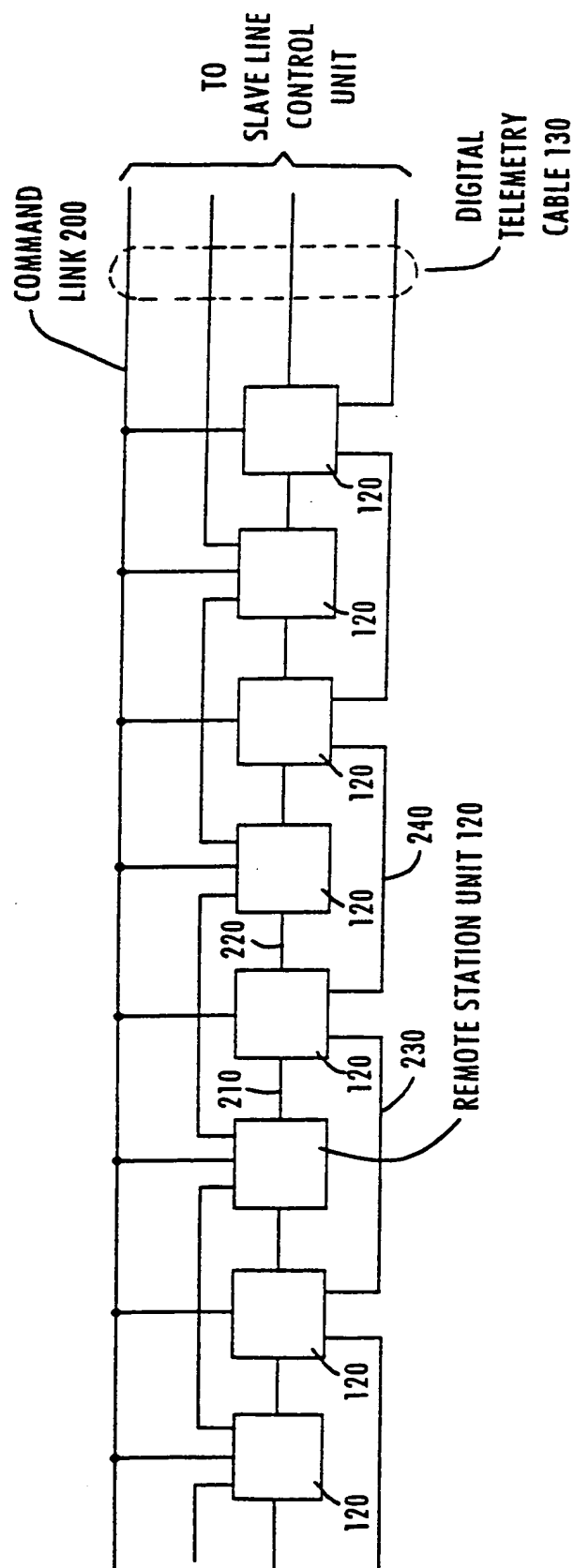


Figure 2

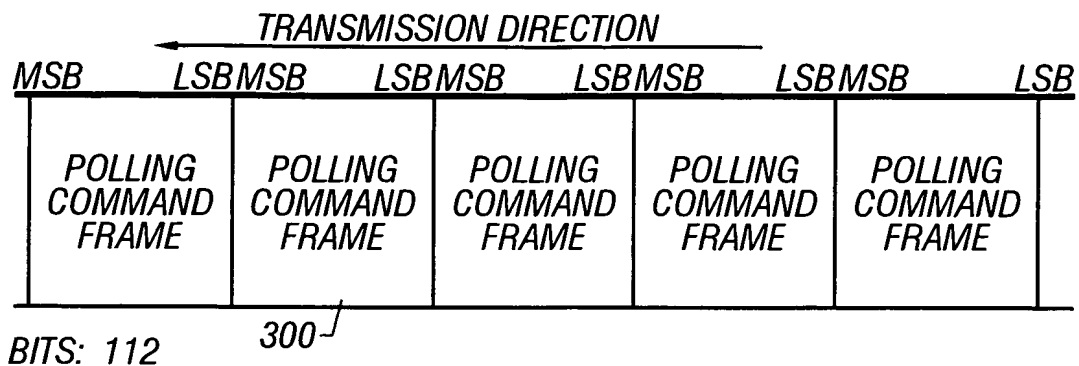


FIG. 3A

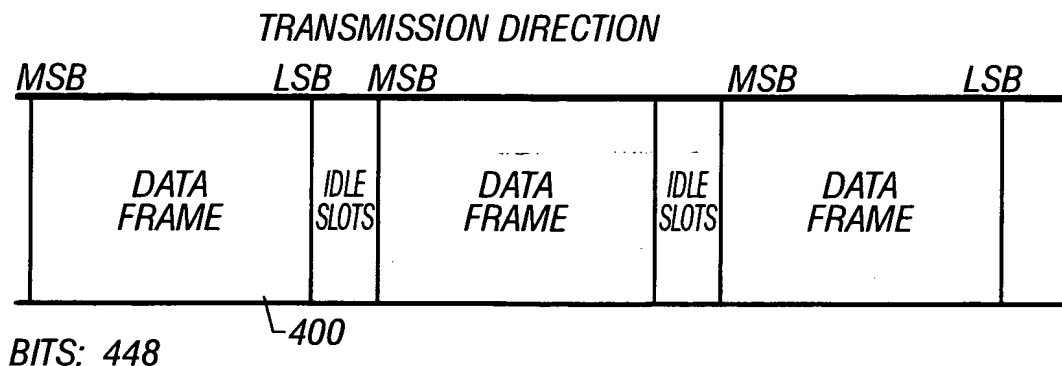


FIG. 3B

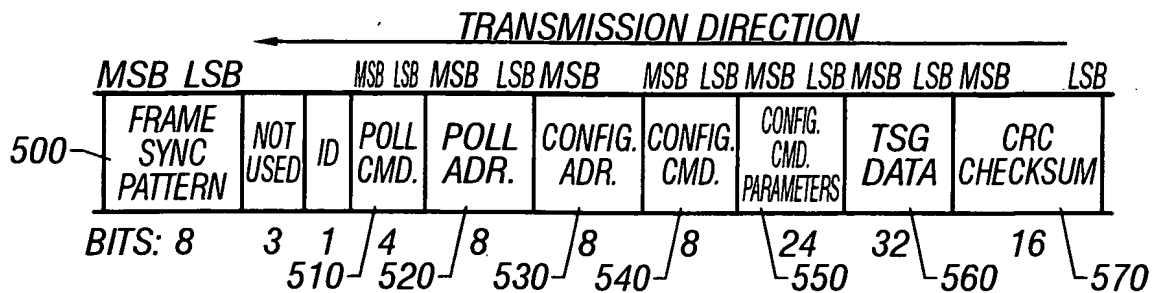


FIG. 3C

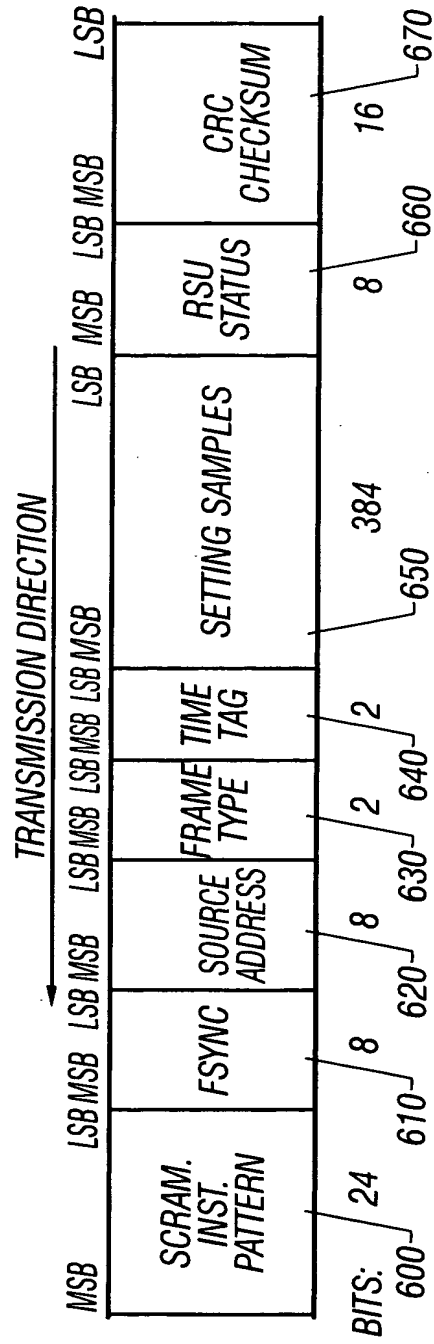


FIG. 3D

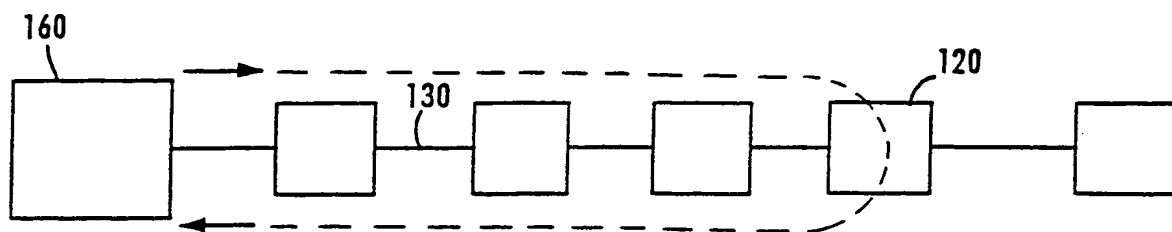


Figure 4

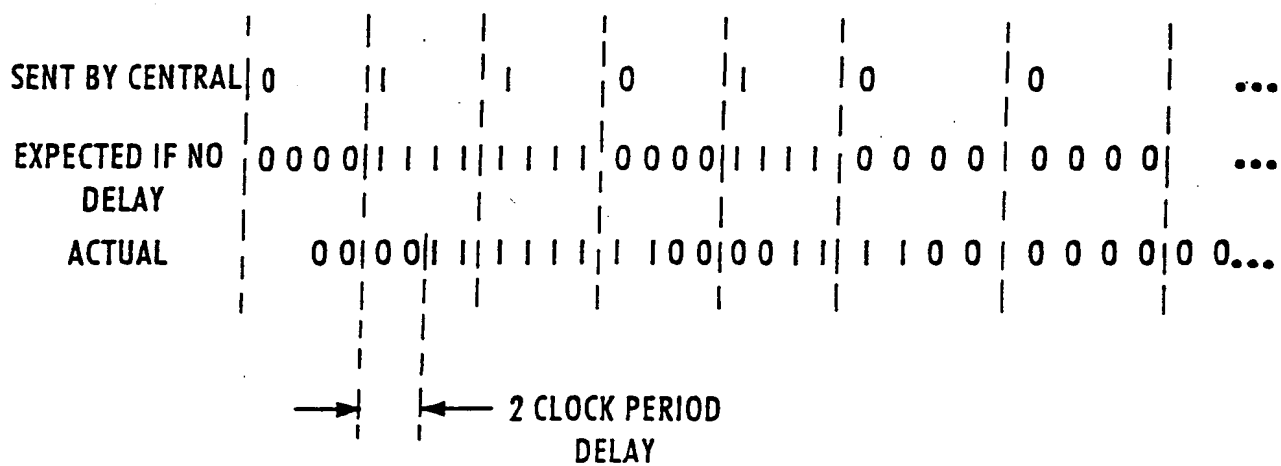


Figure 5

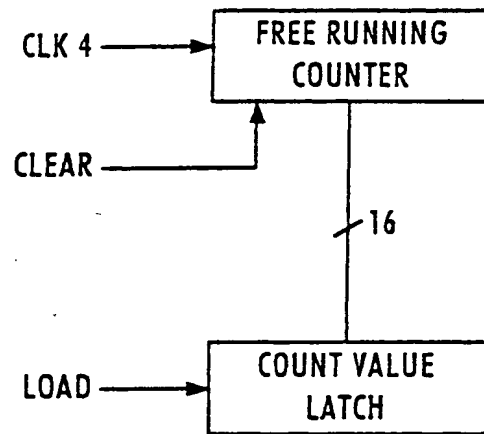
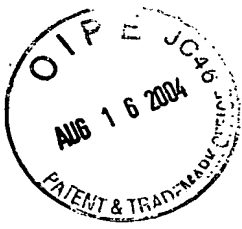


Figure 6A



POLL SEQUENCE

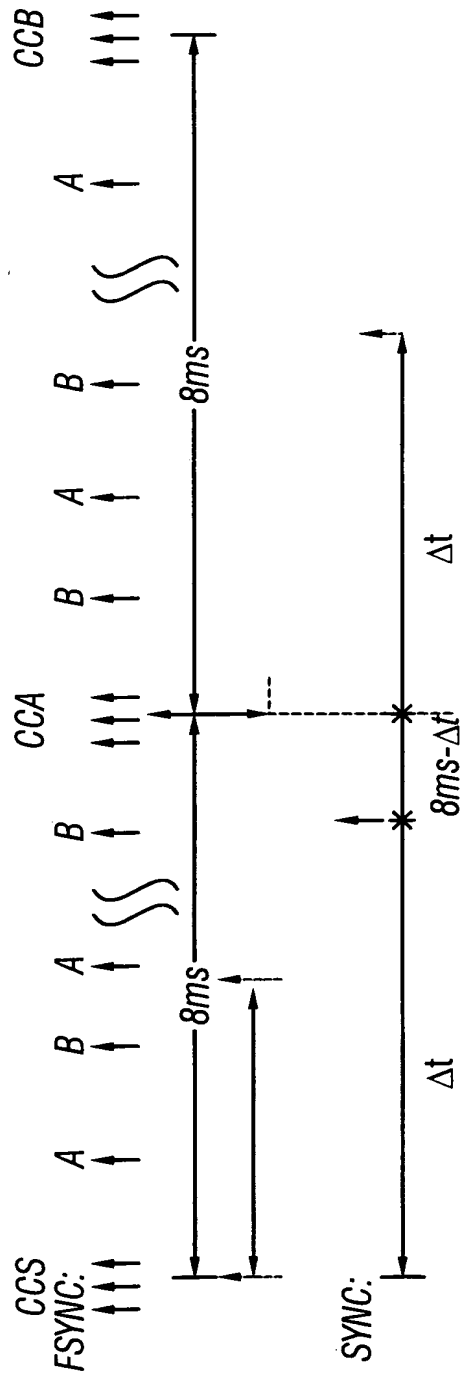


FIG. 6B

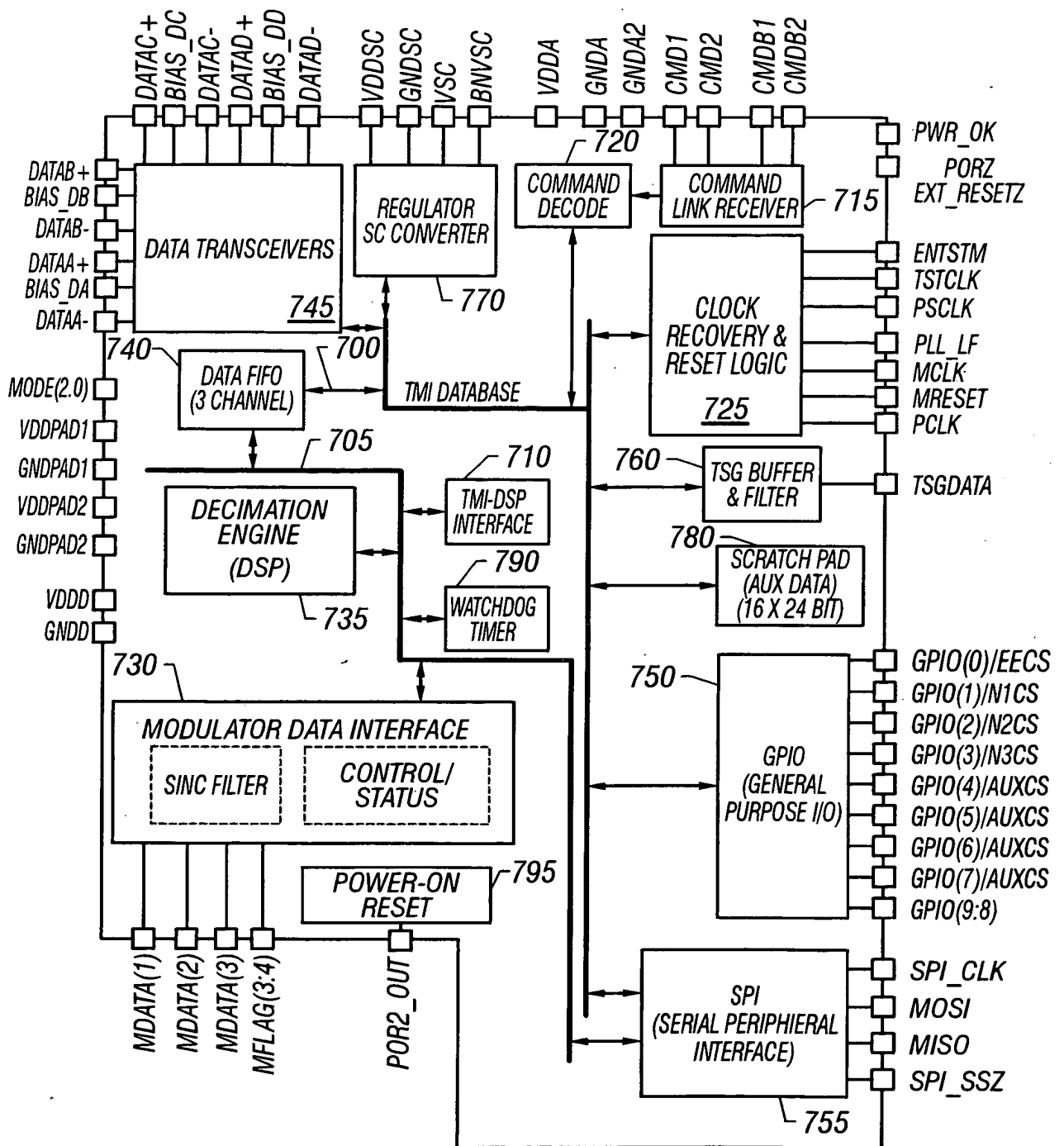


FIG. 7

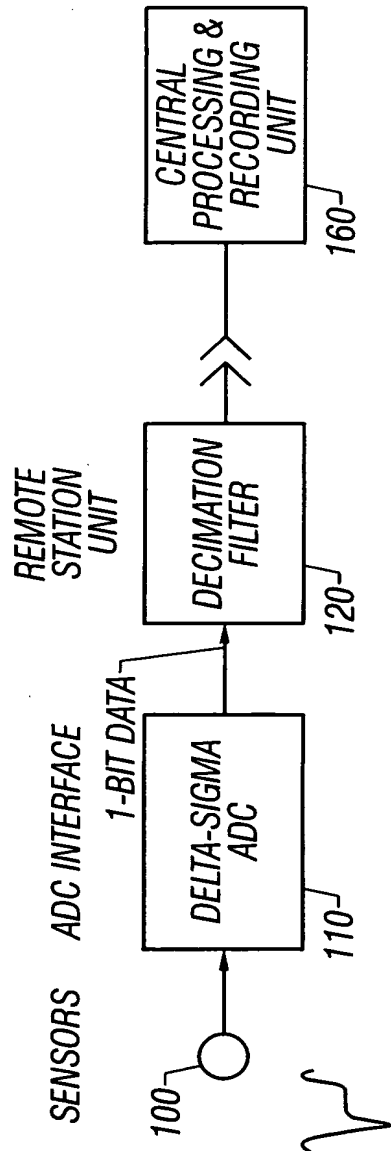


FIG. 8

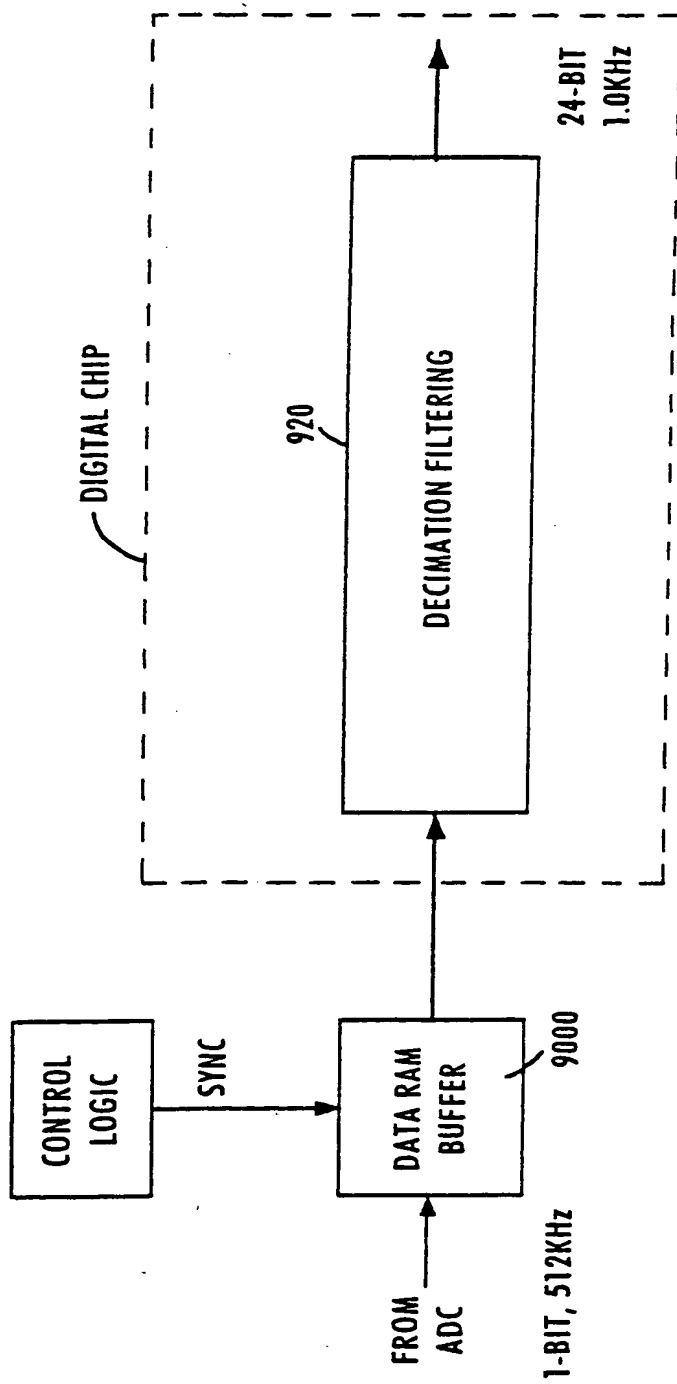


Figure 9 (PRIOR ART)

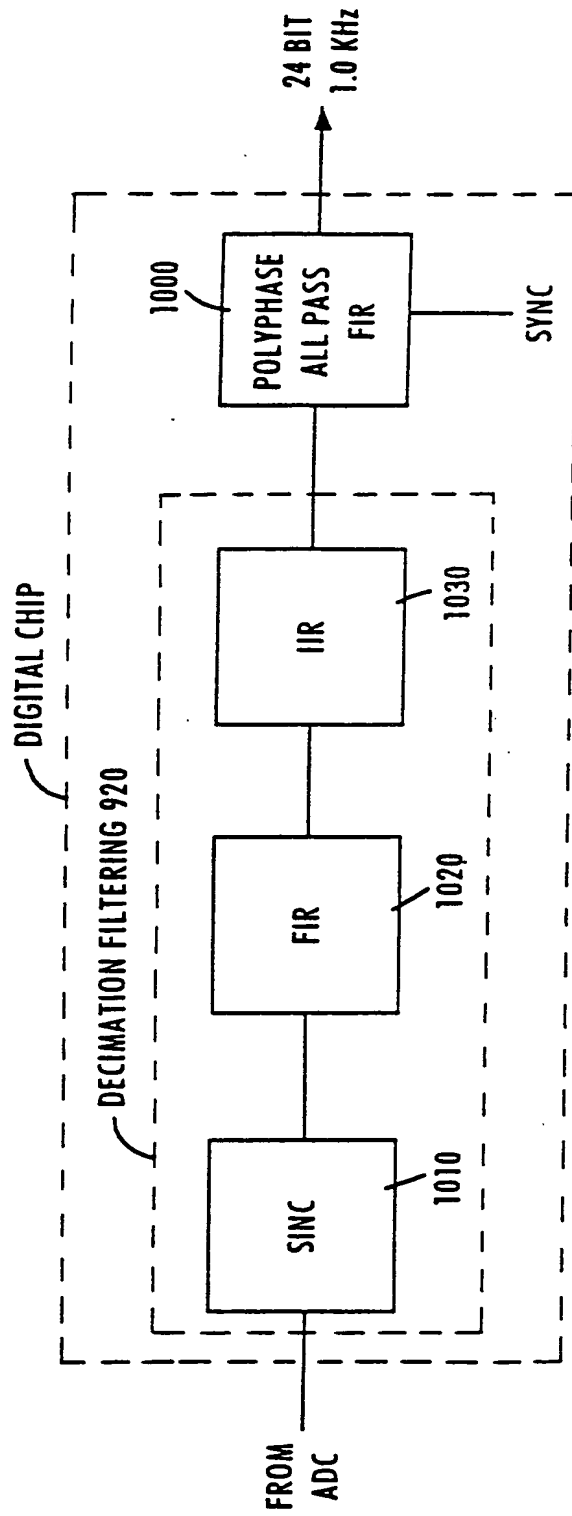


Figure 10

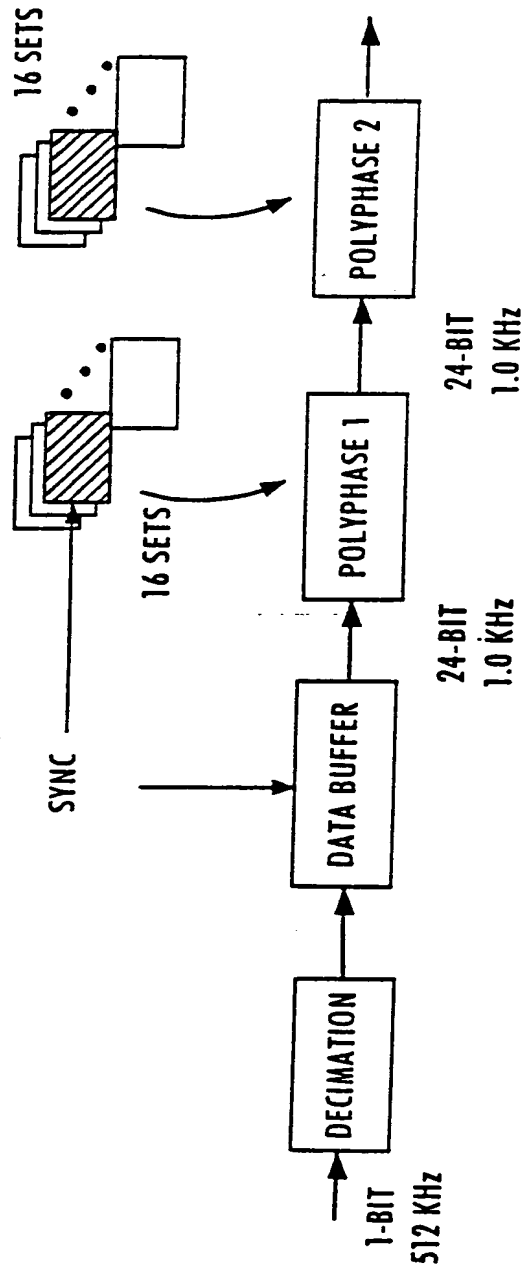


Figure 11

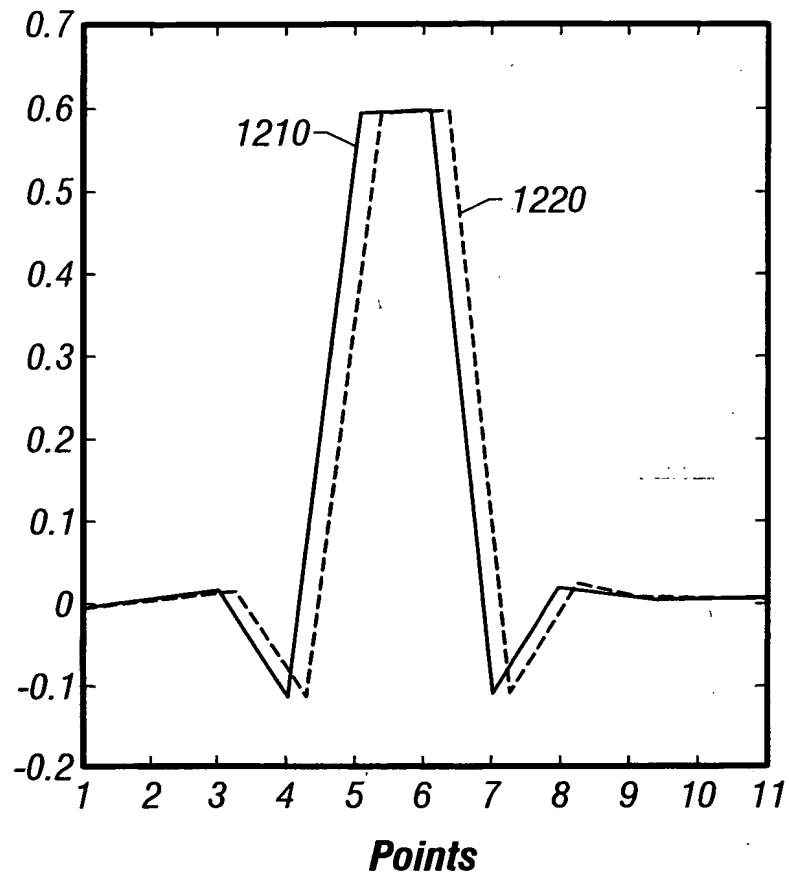


FIG. 12

1ST ORDER SINC FILTER



FIG. 13-1A

2ND ORDER SINC FILTER

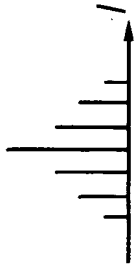


FIG. 13-2A

3RD ORDER SINC FILTER

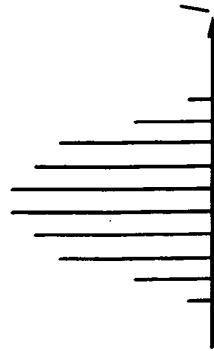


FIG. 13-3A

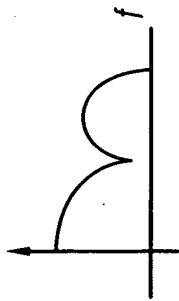


FIG. 13-1B

$$H(Z) = \frac{(1 - Z^{-4})}{(1 - Z^{-1})}$$

FIG. 13-1C

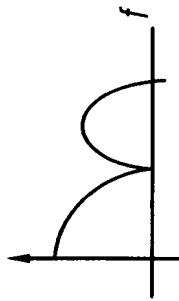


FIG. 13-2B

$$H(Z) = \frac{(1 - Z^{-4})^2}{(1 - Z^{-1})^2}$$

FIG. 13-2C

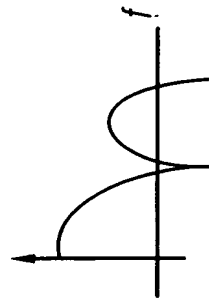
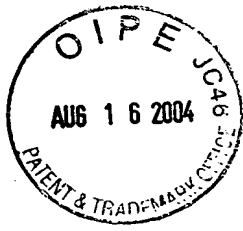


FIG. 13-3B

$$H(Z) = \frac{(1 - Z^{-4})^3}{(1 - Z^{-1})^3}$$

FIG. 13-3C



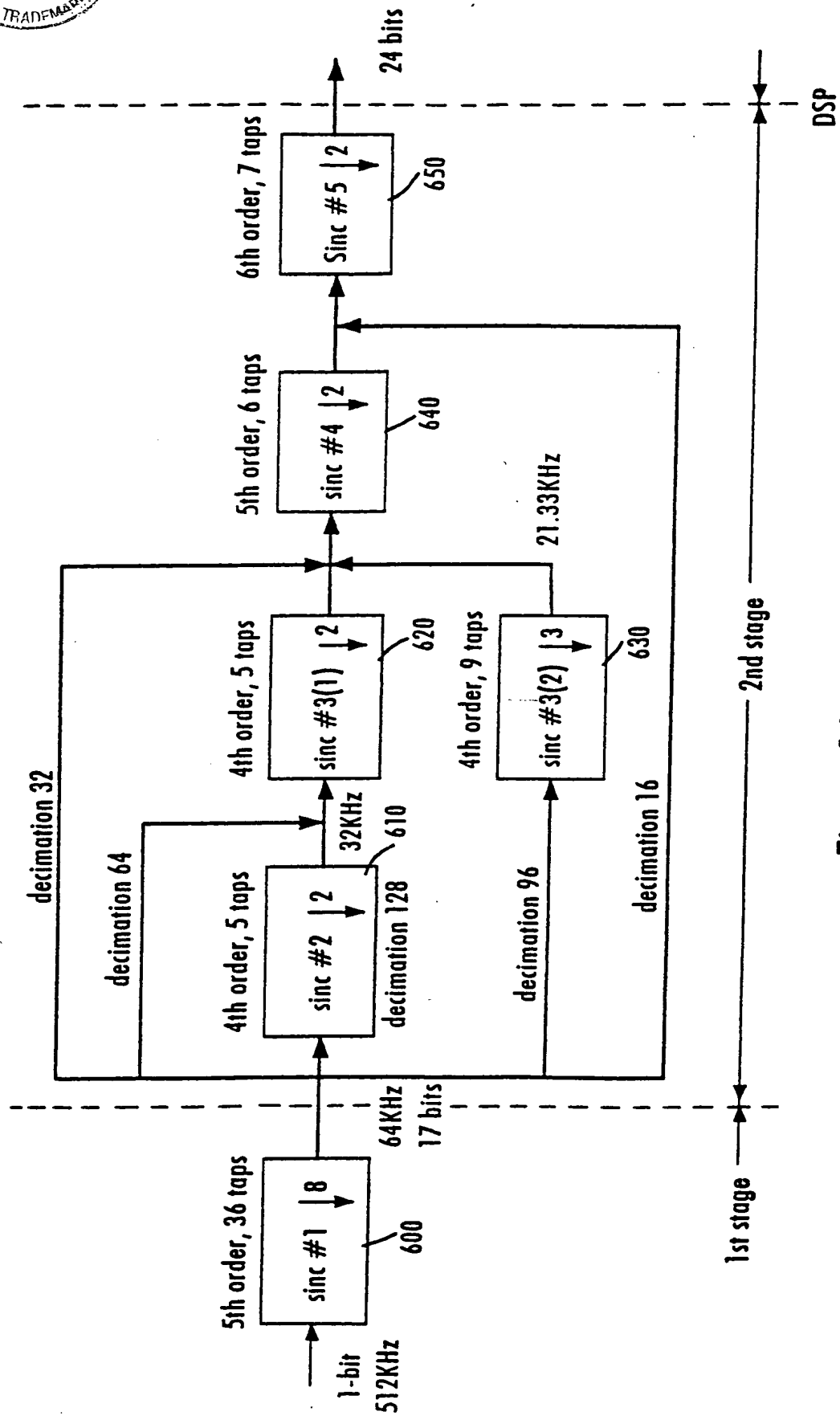
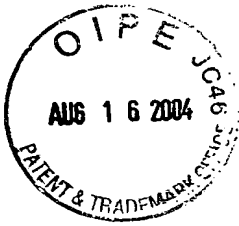


Figure 14

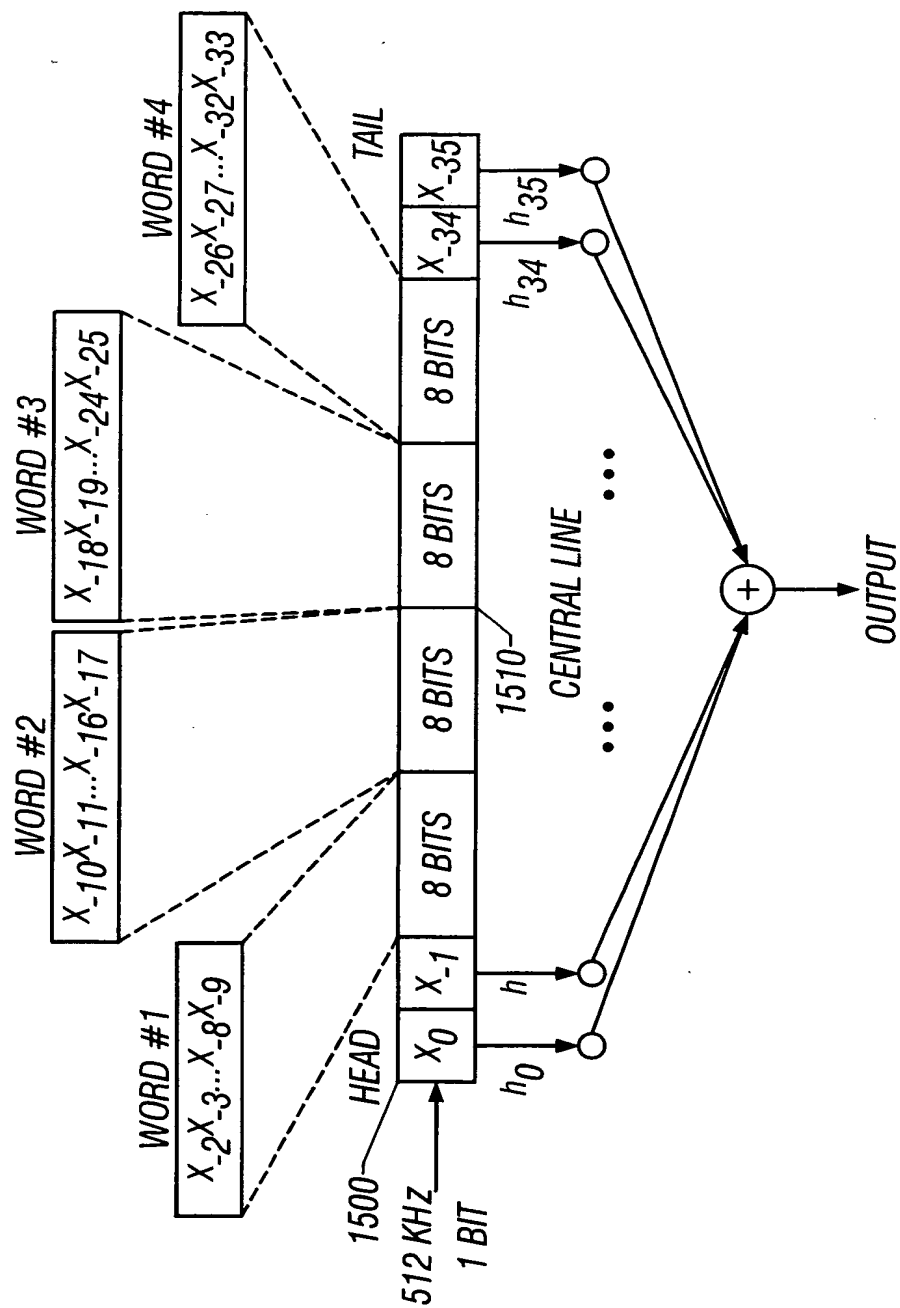


FIG. 15

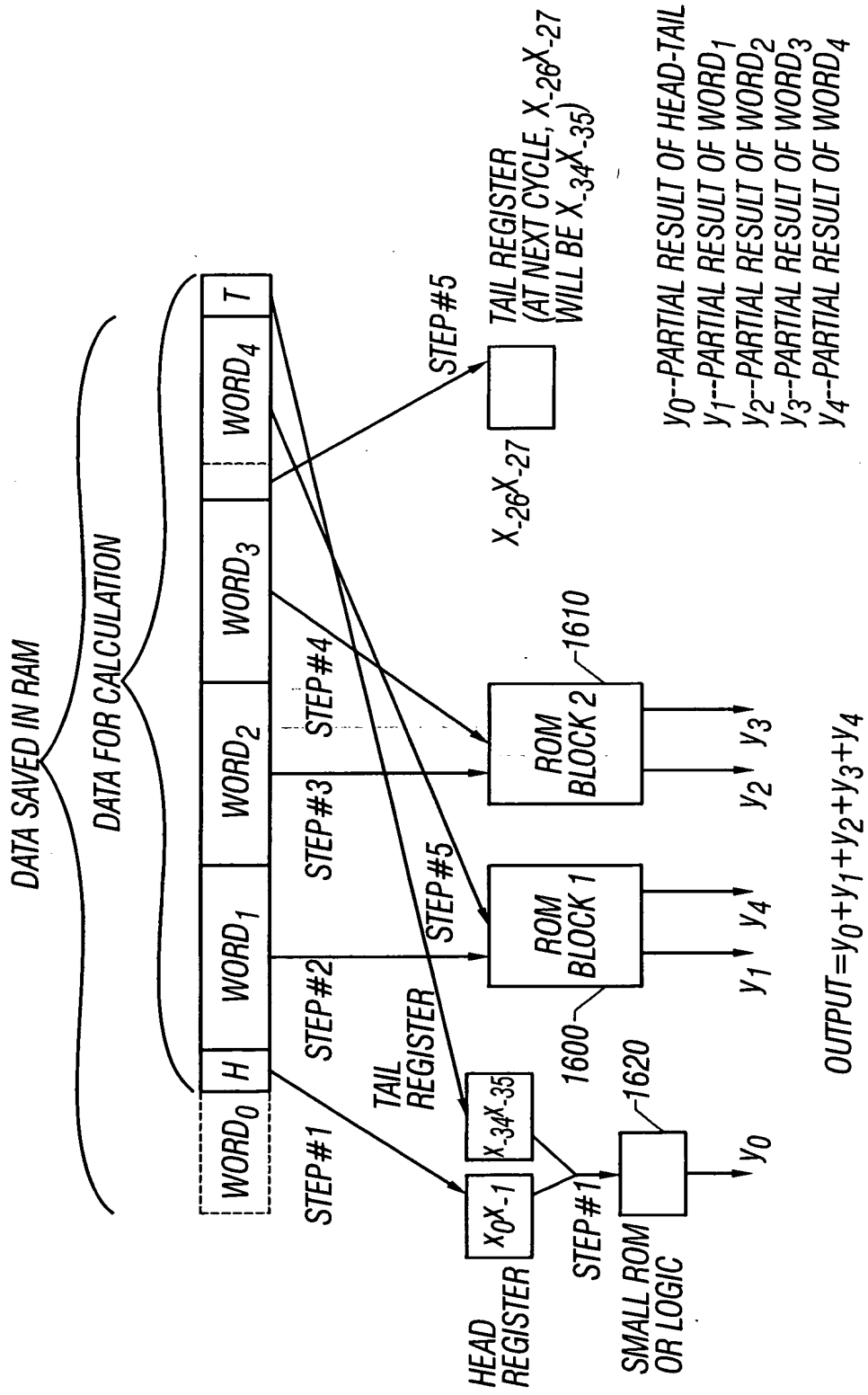


FIG. 16

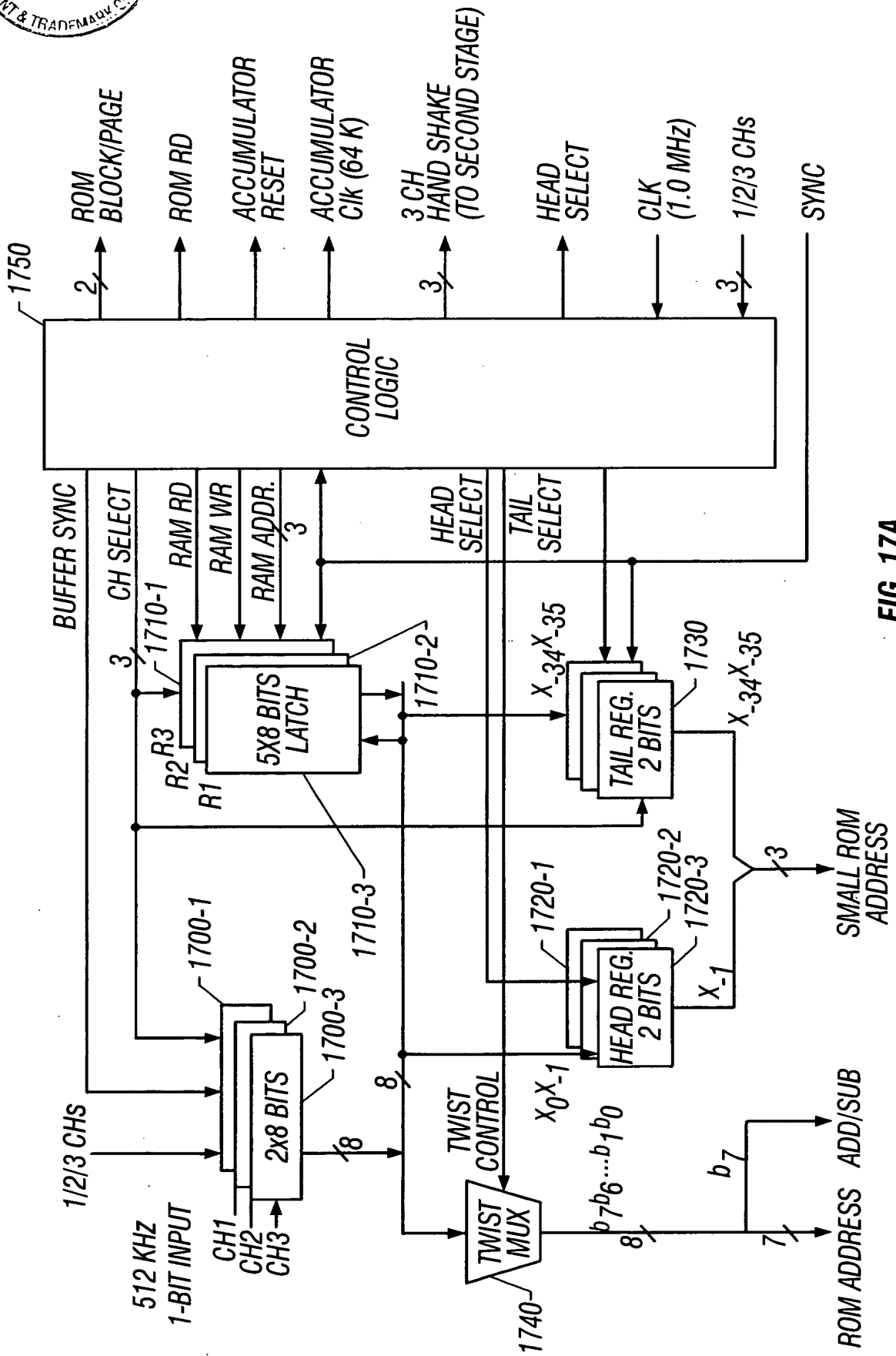


FIG. 17A

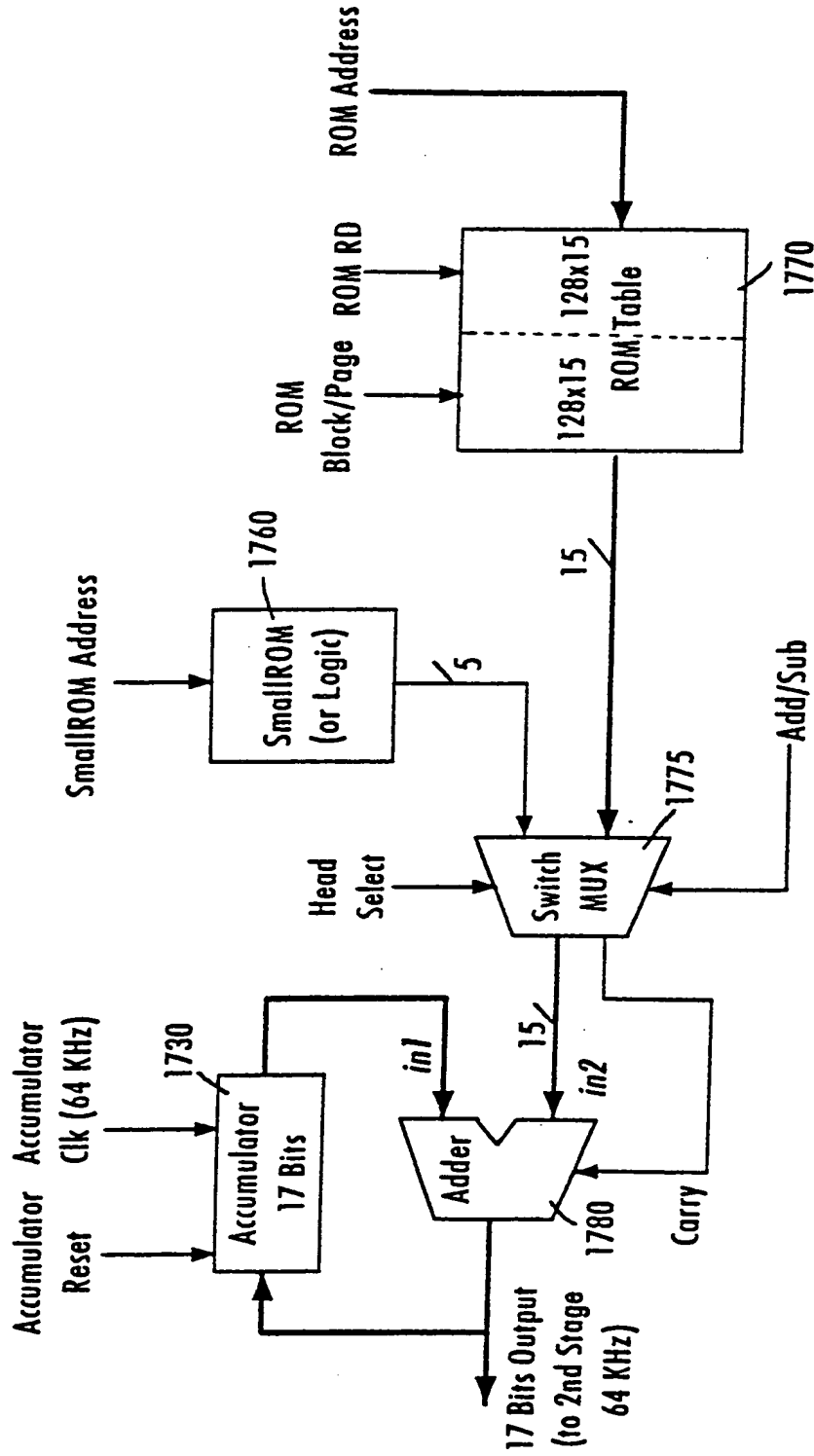


Figure 17B

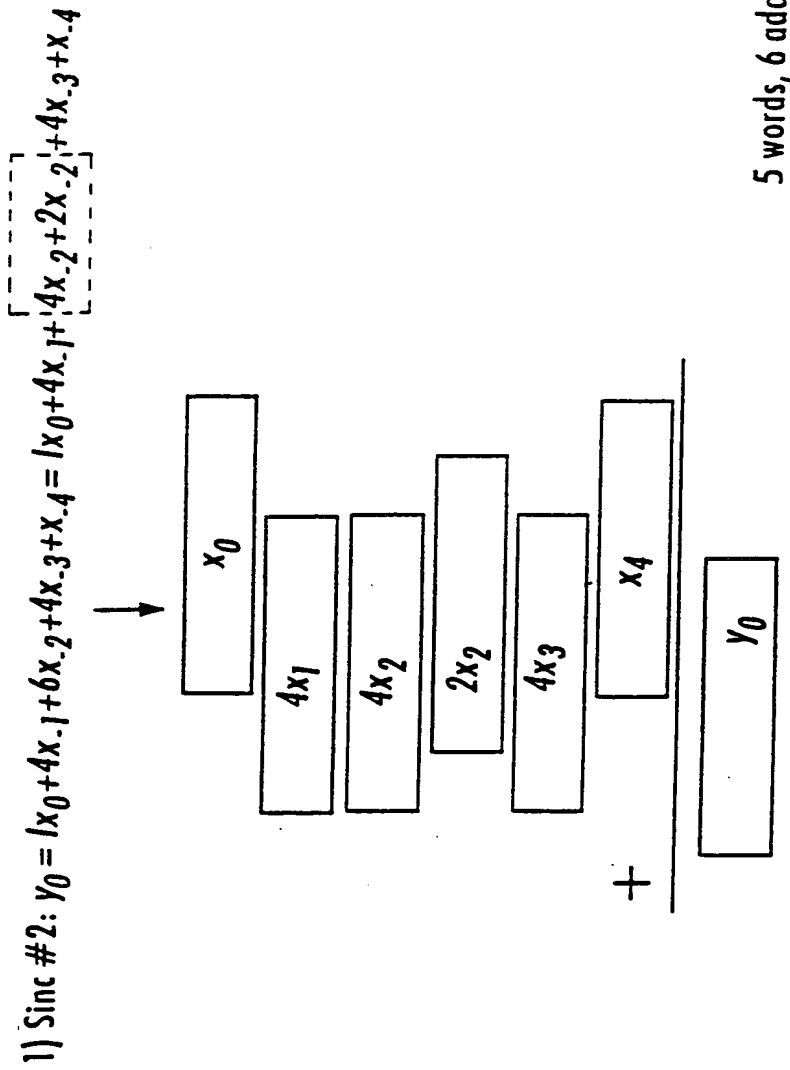


Figure 18A



FIG. 18B-1 SINC#3(1)=SINC#2

5 WORDS, 6 ADDITIONS

FIG. 18B-2 SINC#3(2): $x_0 + 4x_{-1} + 10x_{-2} + 16x_{-3} + 19x_{-4} + 16x_{-5} + 10x_{-6} + 4x_{-7} + x_{-8}$
 $= x_0 + 4x_{-1} + \boxed{8x_{-2} + 2x_{-2}} + 16x_{-3} + \boxed{16x_{-4} + 2x_{-4} + x_{-4}} + 16x_{-5} + \boxed{8x_{-6} + 2x_{-6}} + 4x_{-7} + x_{-8}$

9 WORDS, 13 ADDITIONS

FIG. 18B-3 SINC#4: $x_0 + 5x_{-1} + 10x_{-2} + 10x_{-3} + 5x_{-4} + x_{-5}$

$$= x_0 + \boxed{4x_{-1} + x_{-1}} + \boxed{8x_{-2} + 2x_{-2}} + \boxed{8x_{-3} + 2x_{-3}} + \boxed{4x_{-4} + x_{-4}} + x_{-5}$$

6 WORDS, 10 ADDITIONS

FIG. 18B-4 SINC#5: $x_0 + 6x_{-1} + 15x_{-2} + 20x_{-3} + 15x_{-4} + 6x_{-5} + x_{-6}$

$$= x_0 + \boxed{4x_{-1} + 2x_{-1}} + \boxed{16x_{-2} + x_{-2}} + \boxed{16x_{-3} + 4x_{-3}} + \boxed{16x_{-4} + x_{-4}} + \boxed{4x_{-5} + 2x_{-5}} + x_{-6}$$

7 WORDS, 12 ADDITIONS

FIG. 18B

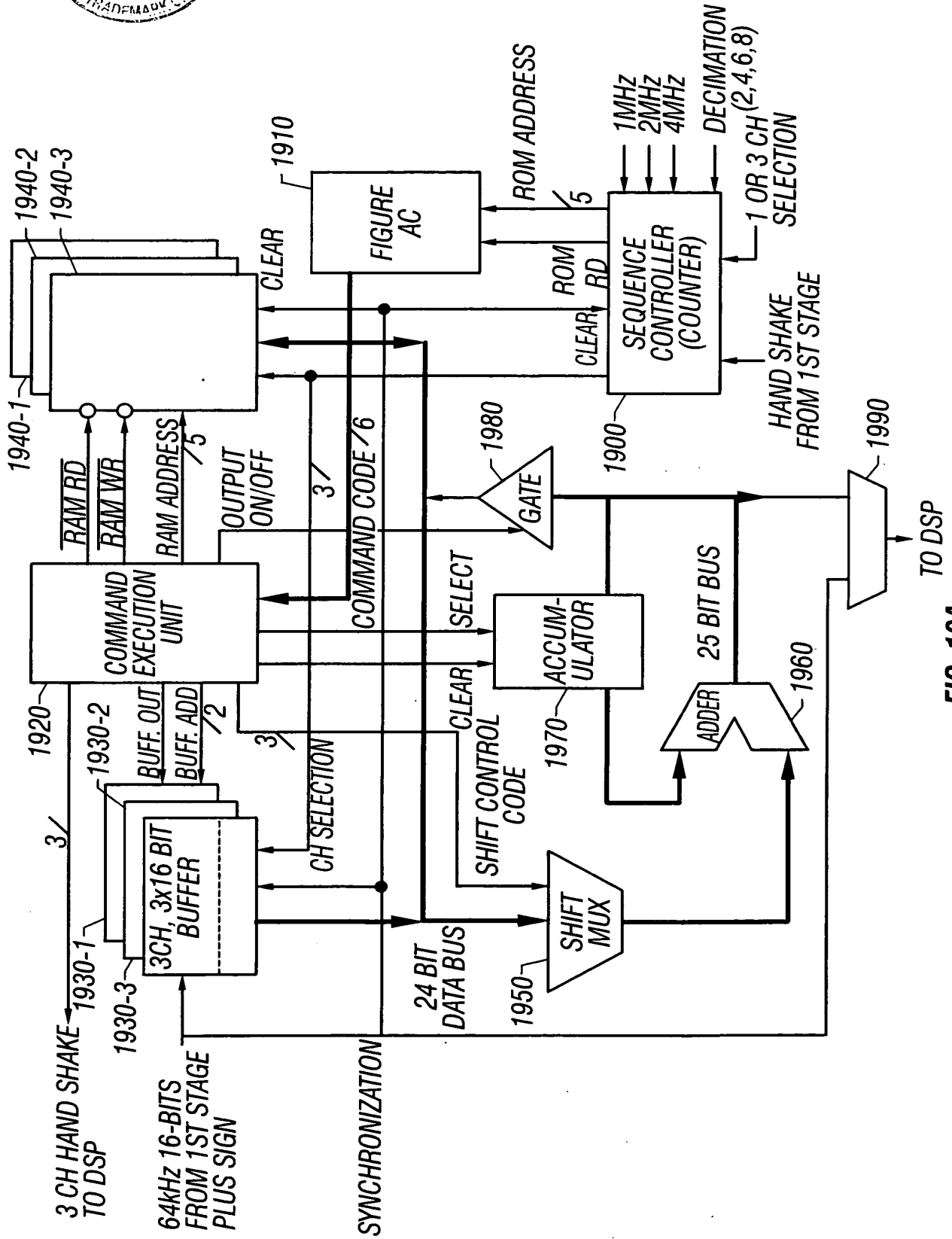


FIG. 19A



Programmable Main-Routine and Sub-Routine, Decimate by 8

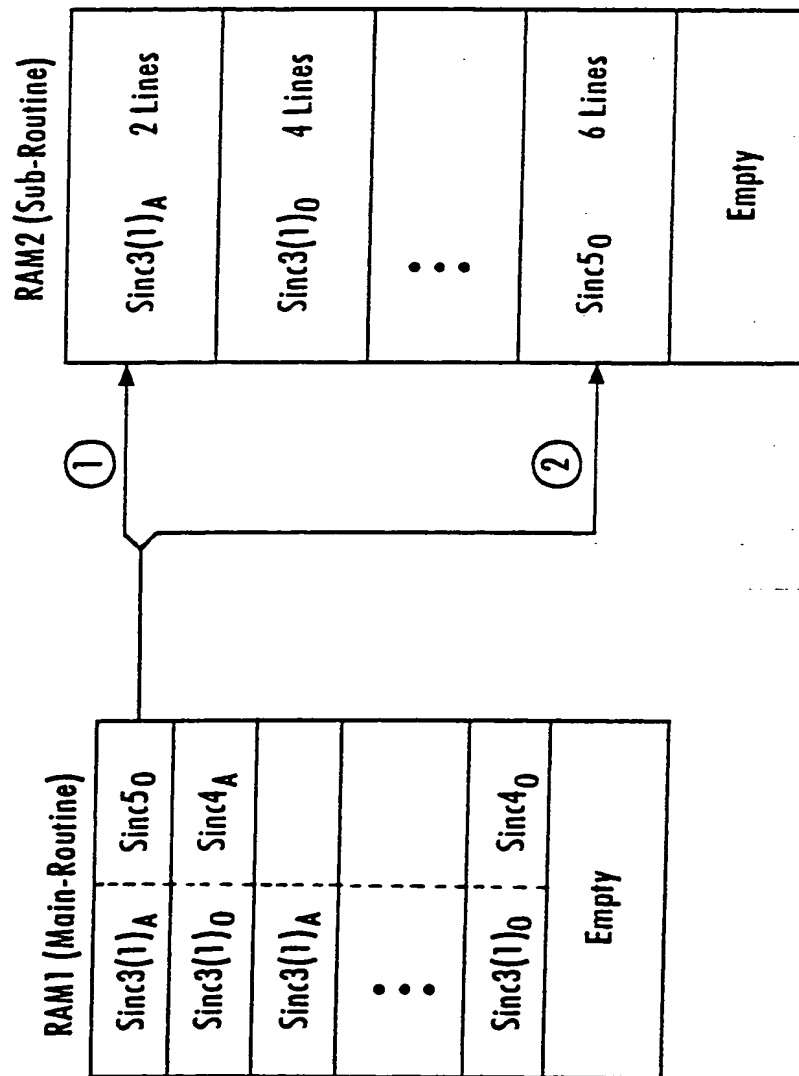


Figure 19B

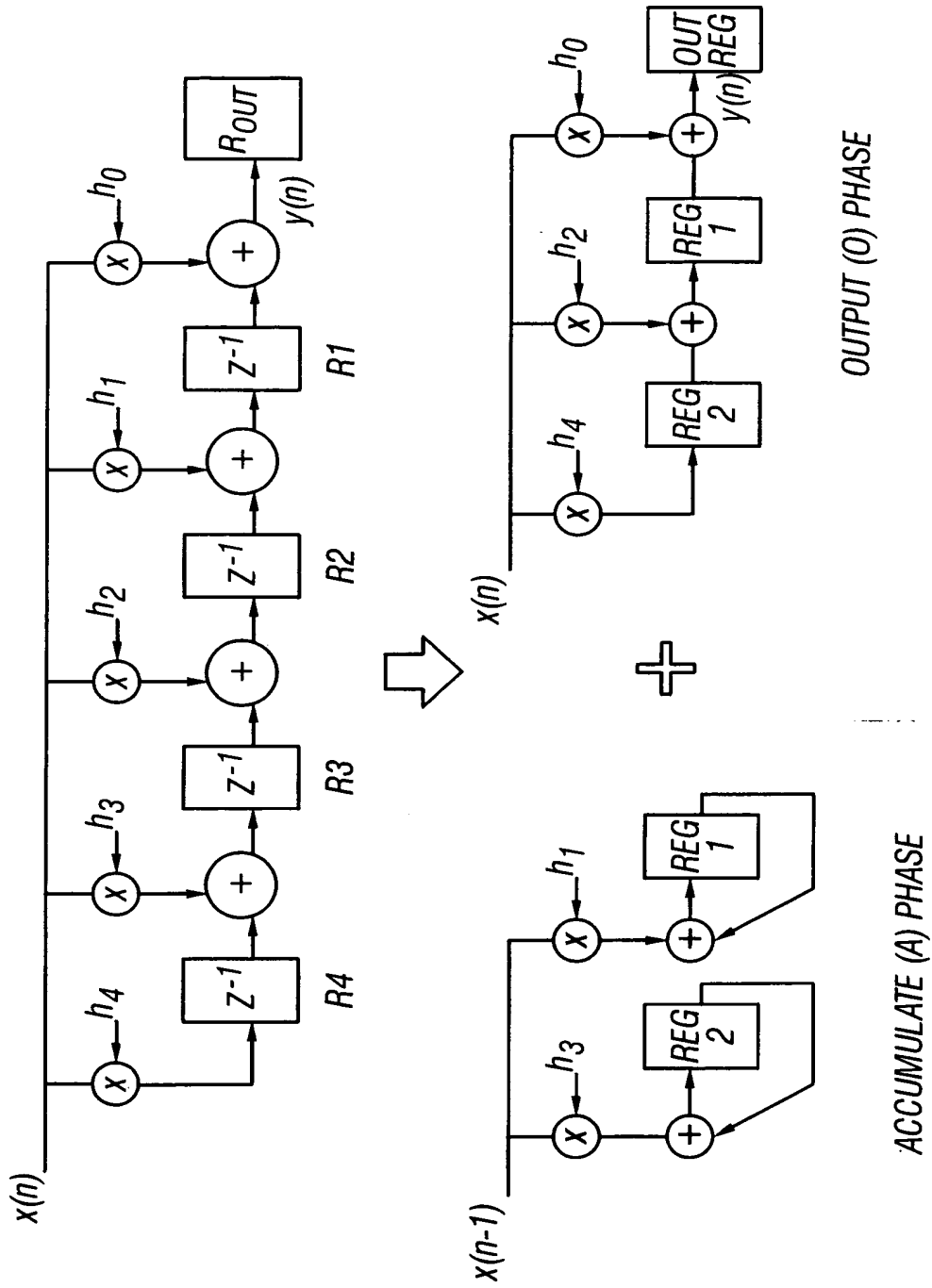


FIG. 20



Figure 21A

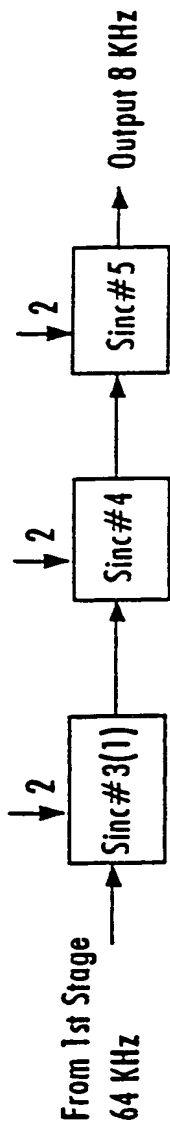


Figure 21B

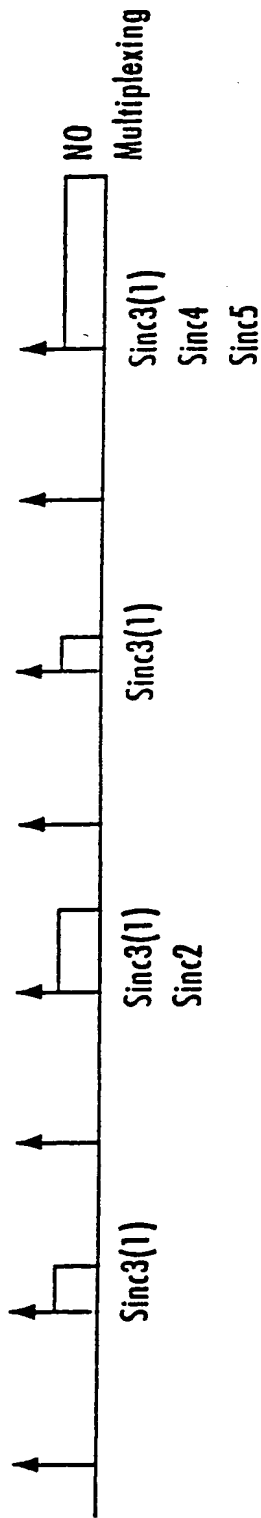


Figure 21C

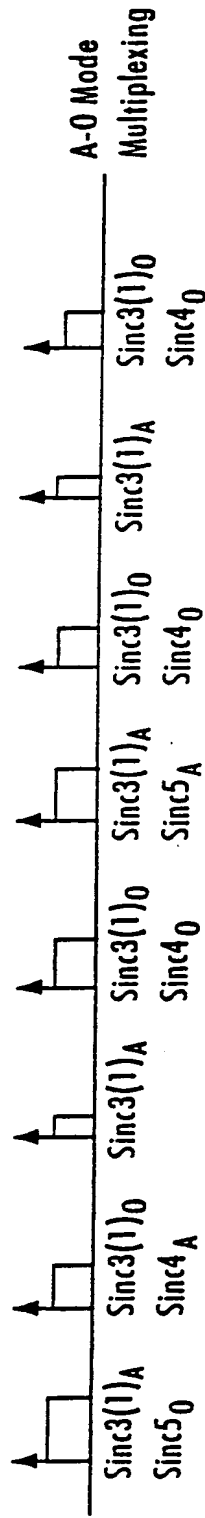
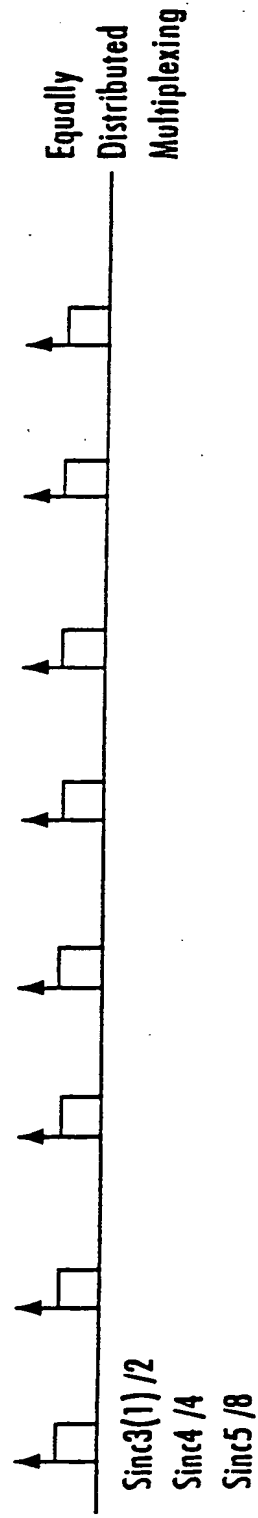


Figure 21D



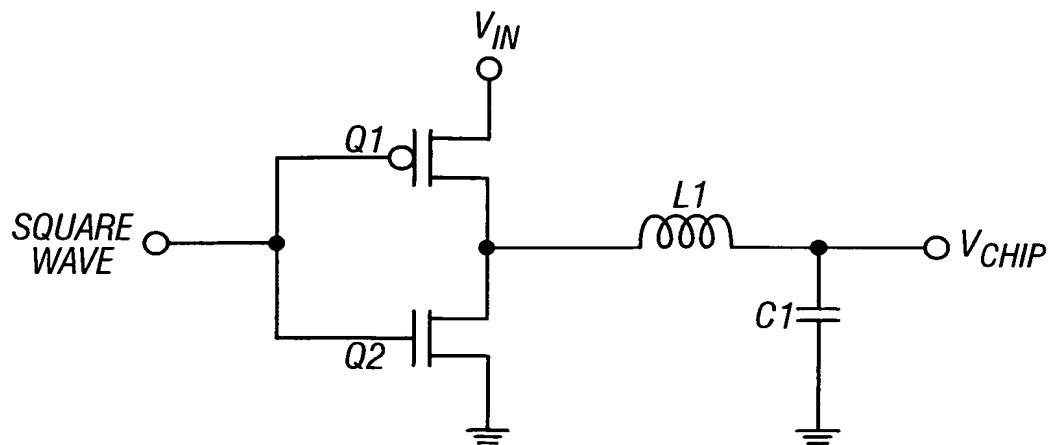


FIG. 22
(Prior Art)

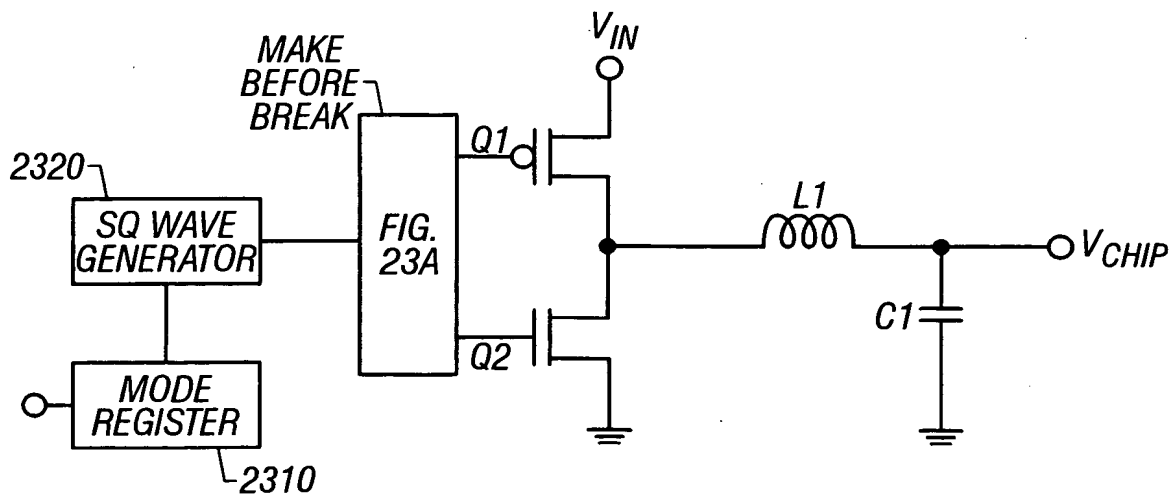


FIG. 23

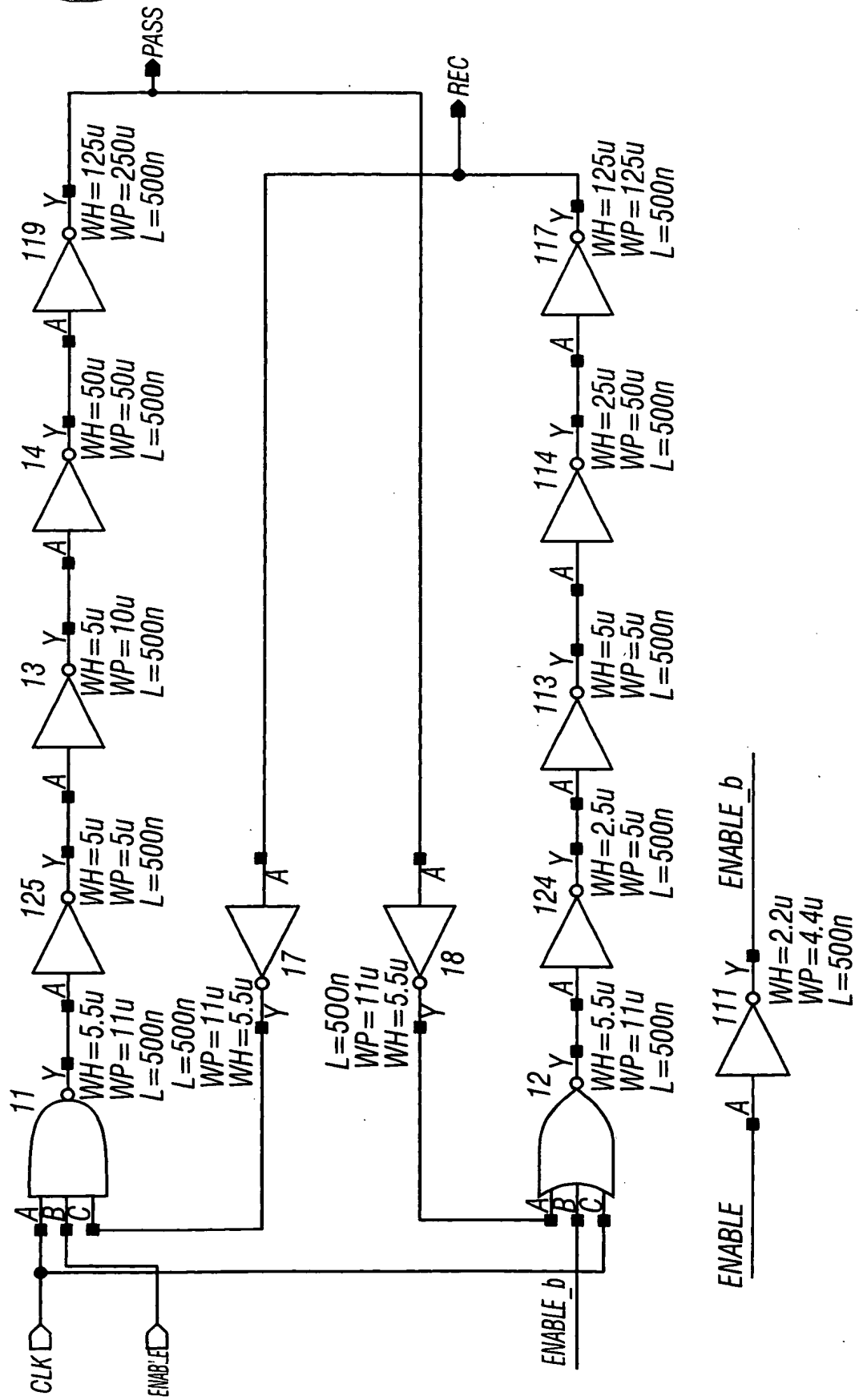
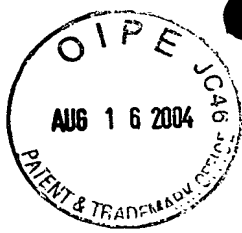


FIG. 24

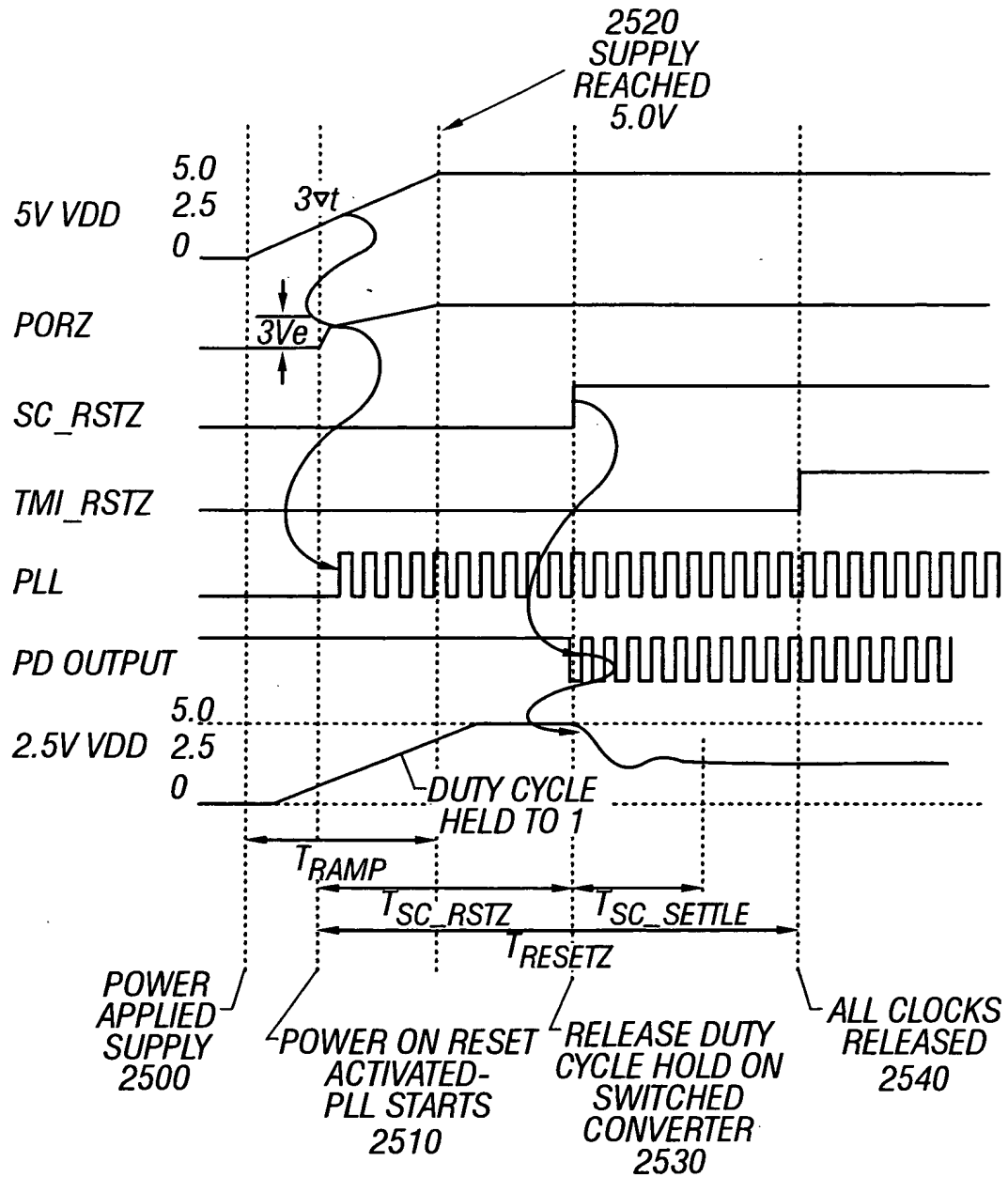


FIG. 25

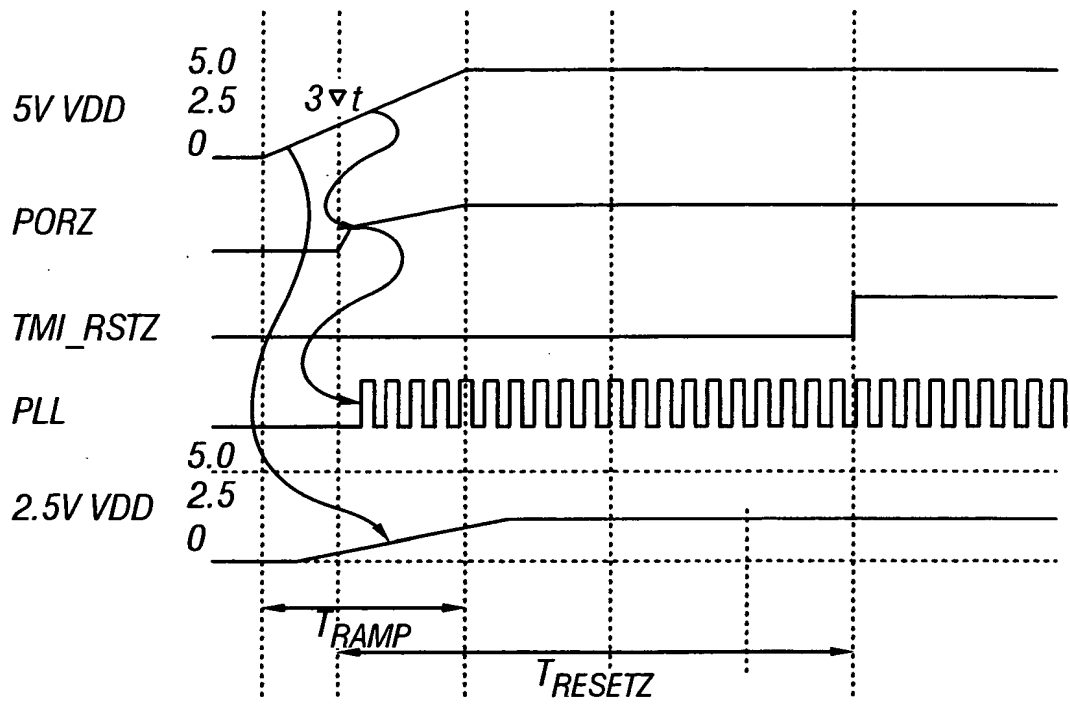
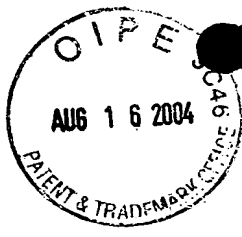


FIG. 26

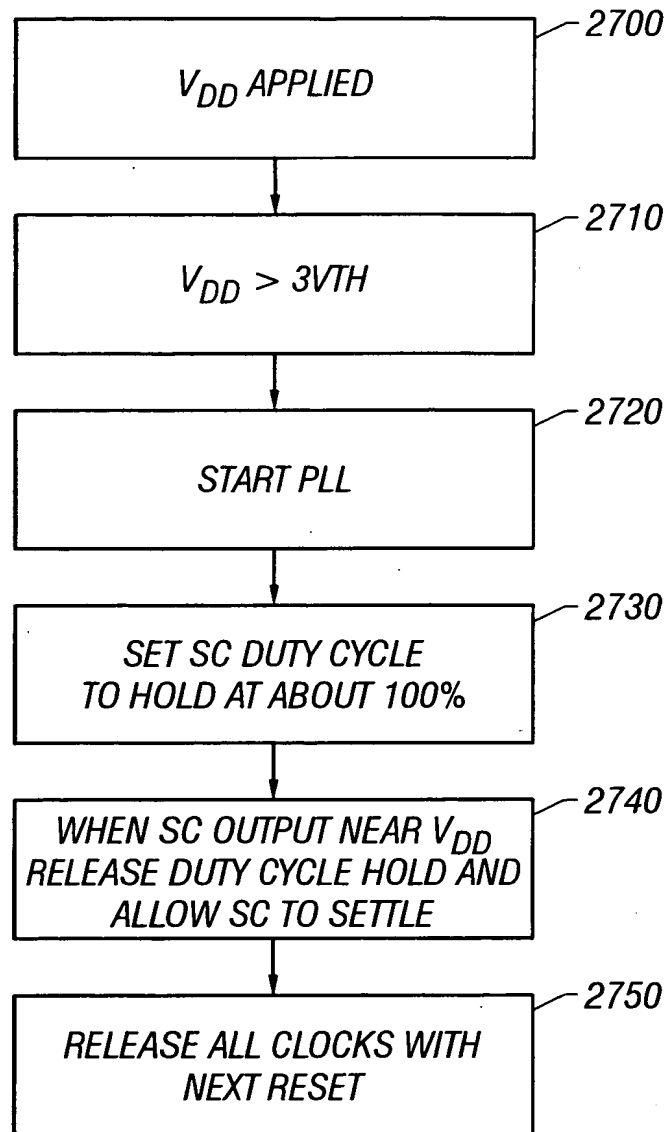
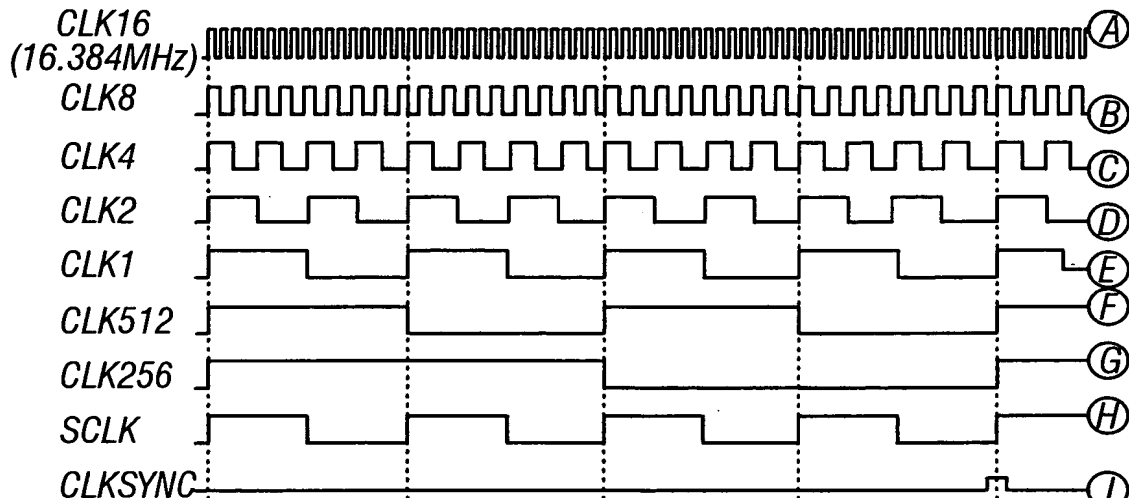


FIG. 27



RSU & ADC INTERFACE CLOCK RELATIONSHIPS WITH SYNC

RSU CLOCKS (CREATED FROM CLK16 RISING EDGE)



ADC CLOCKS (CREATED FROM CLK16 FALLING EDGE)

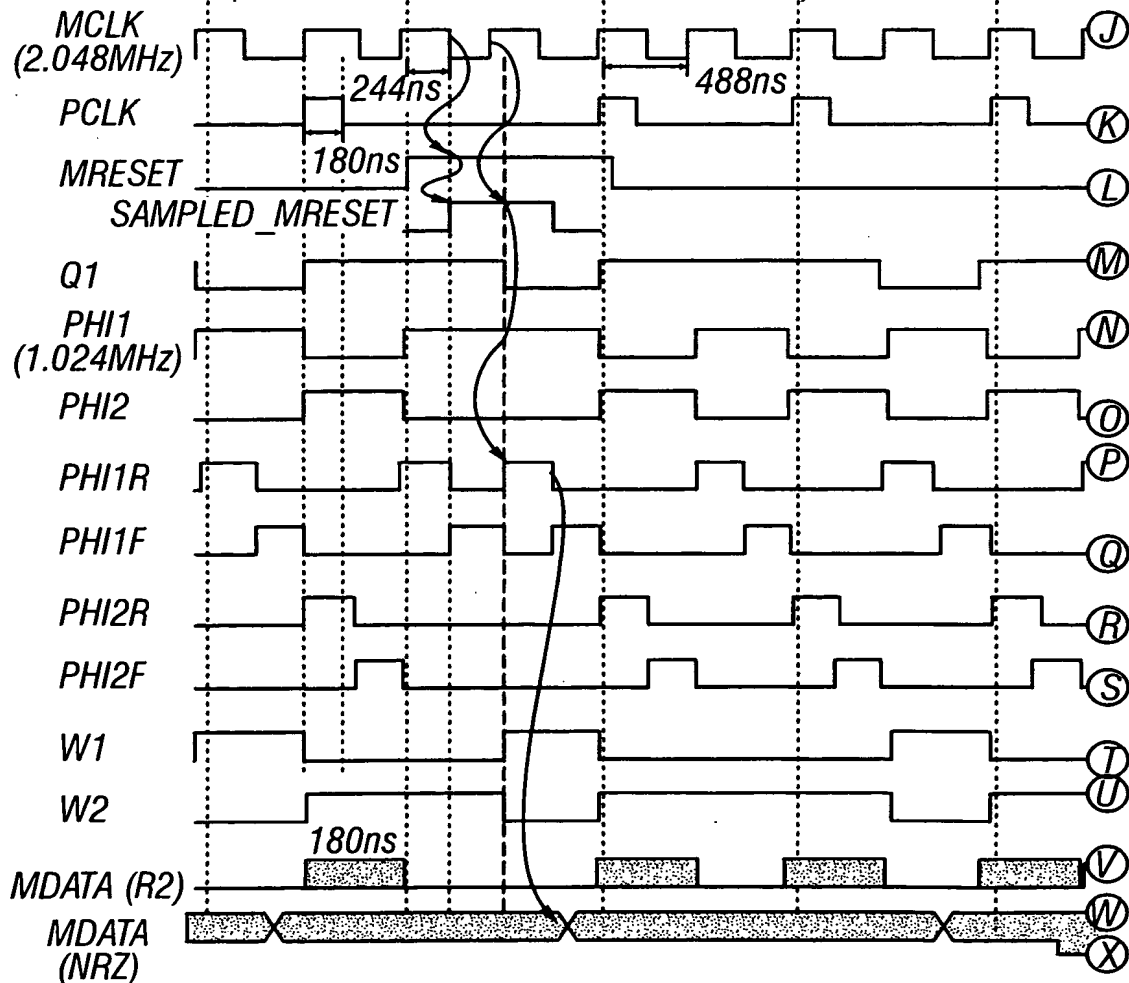


FIG. 28A

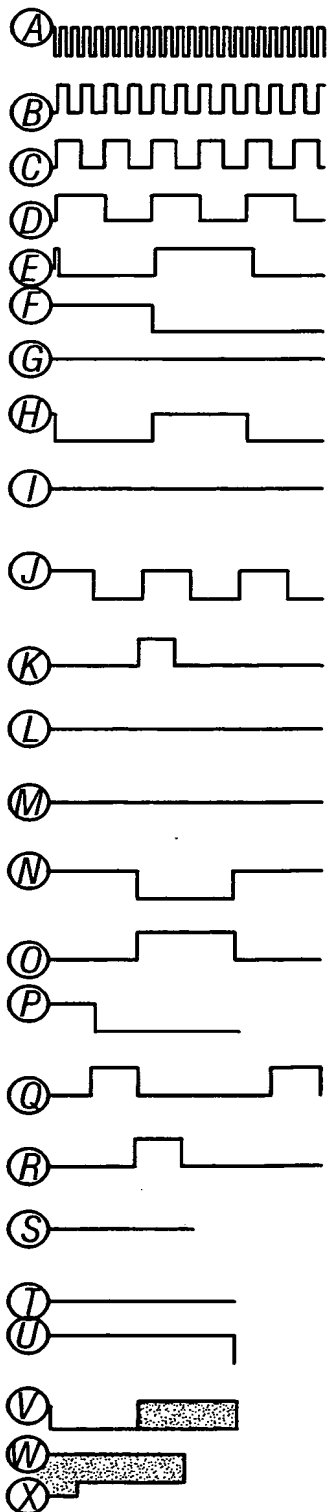


FIG. 28B

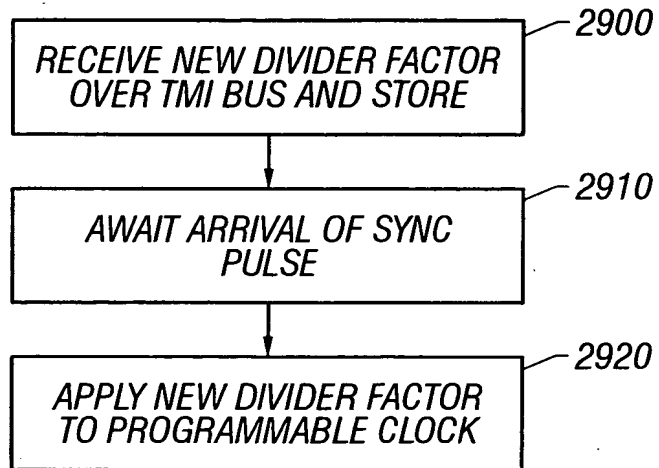


FIG. 29

$$X \cdot Y + ACC + RND$$

FIG. 30

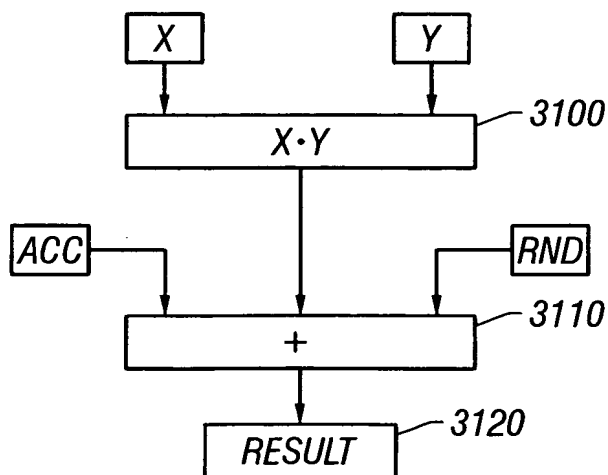


FIG. 31

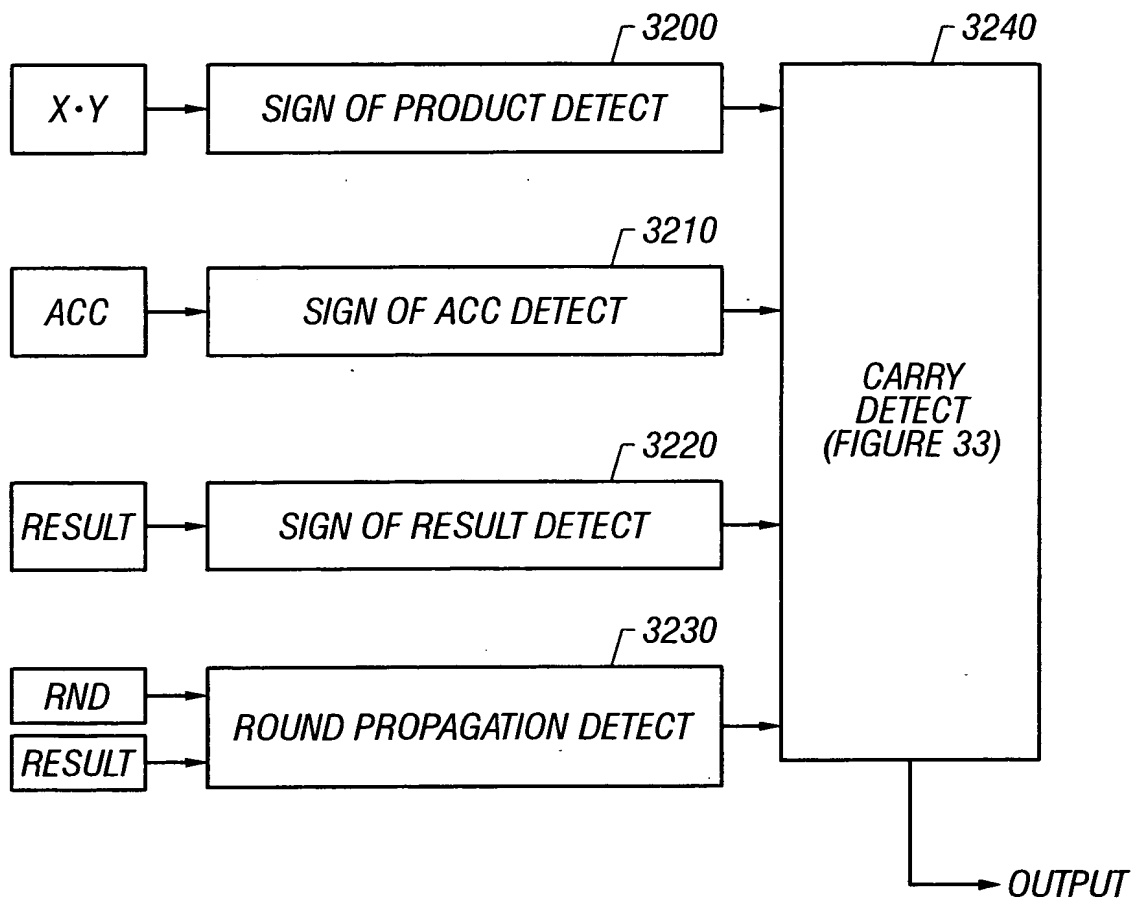


FIG. 32

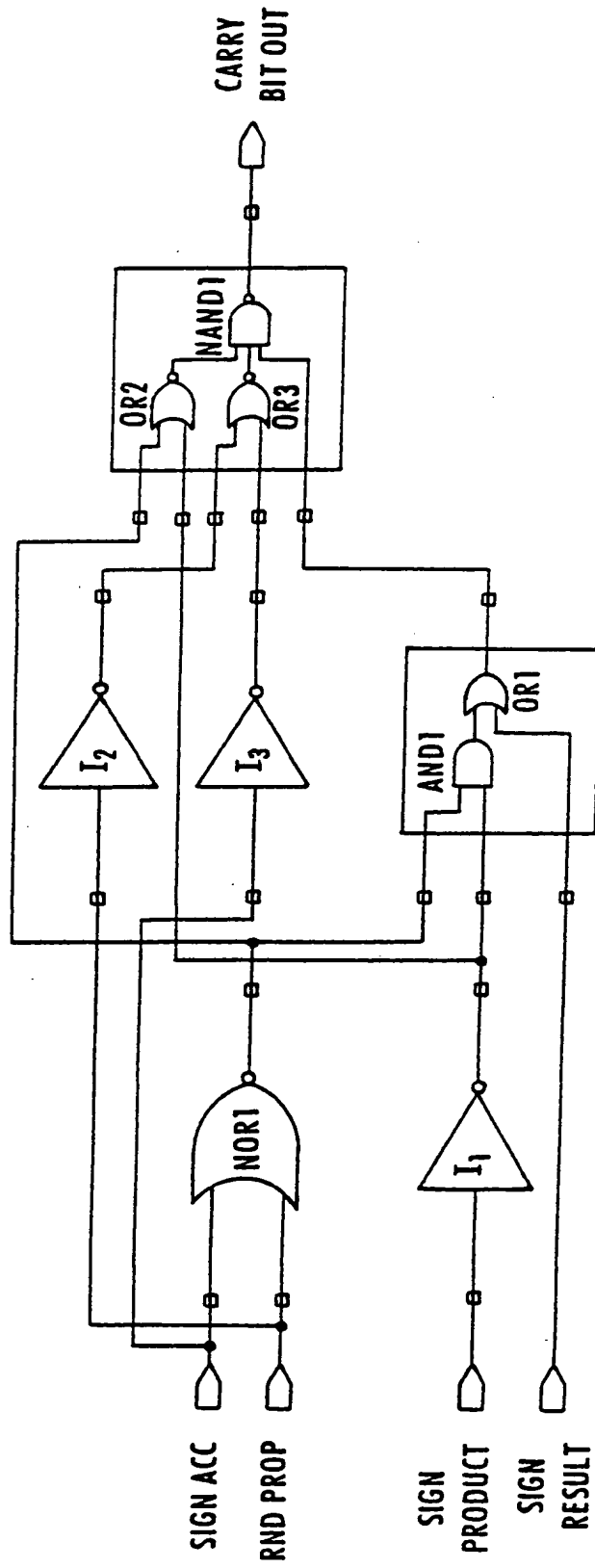


Figure 33